The Construction of "0" Gauge Vehicles for the Beginner.

The G. W. R. 20-ton and 14-ton Goods Brake Vans.

By "SPARKS."

(*Continued from page* 17.)

Use and Characteristics.

THEIR use is obvious. They rejoice in the fat comfortable code name of "Toad," and in the case of the vacuum-fitted ones, of "Toad.A." The 20-ton van is the one I propose to describe, through drawings (but I regret no photograph of the shorter 14-ton vehicle is available) are given of the other van.

An Official Photograph of a G.W.R. 20-ton Goods Brake Van.

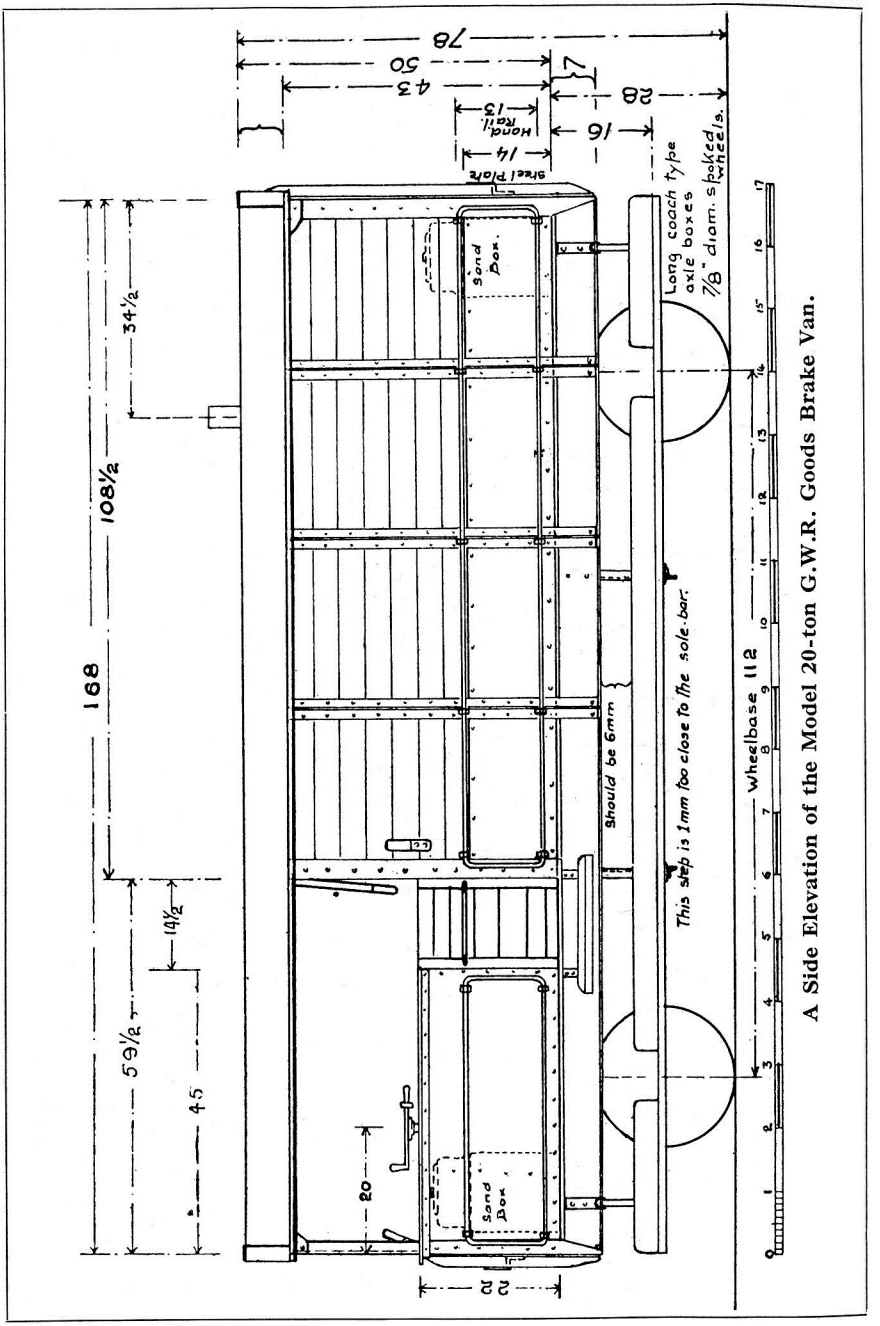
There are many types of G.W.R. Goods Brake Vans, but these two are probably the most common, all of which have minor variations in details in the various types, consequently one seldom sees two identical vehicles.

The 20-ton van has the characteristic long G.W.R. type verandah made of steel plate and have steel plate sheets along the lower portions of the body proper and at the back—for extra strength, while all the framing is either "L" or "T" section iron, whereas the other vehicles have usually wooden outside framing with "T" section iron stanchions.

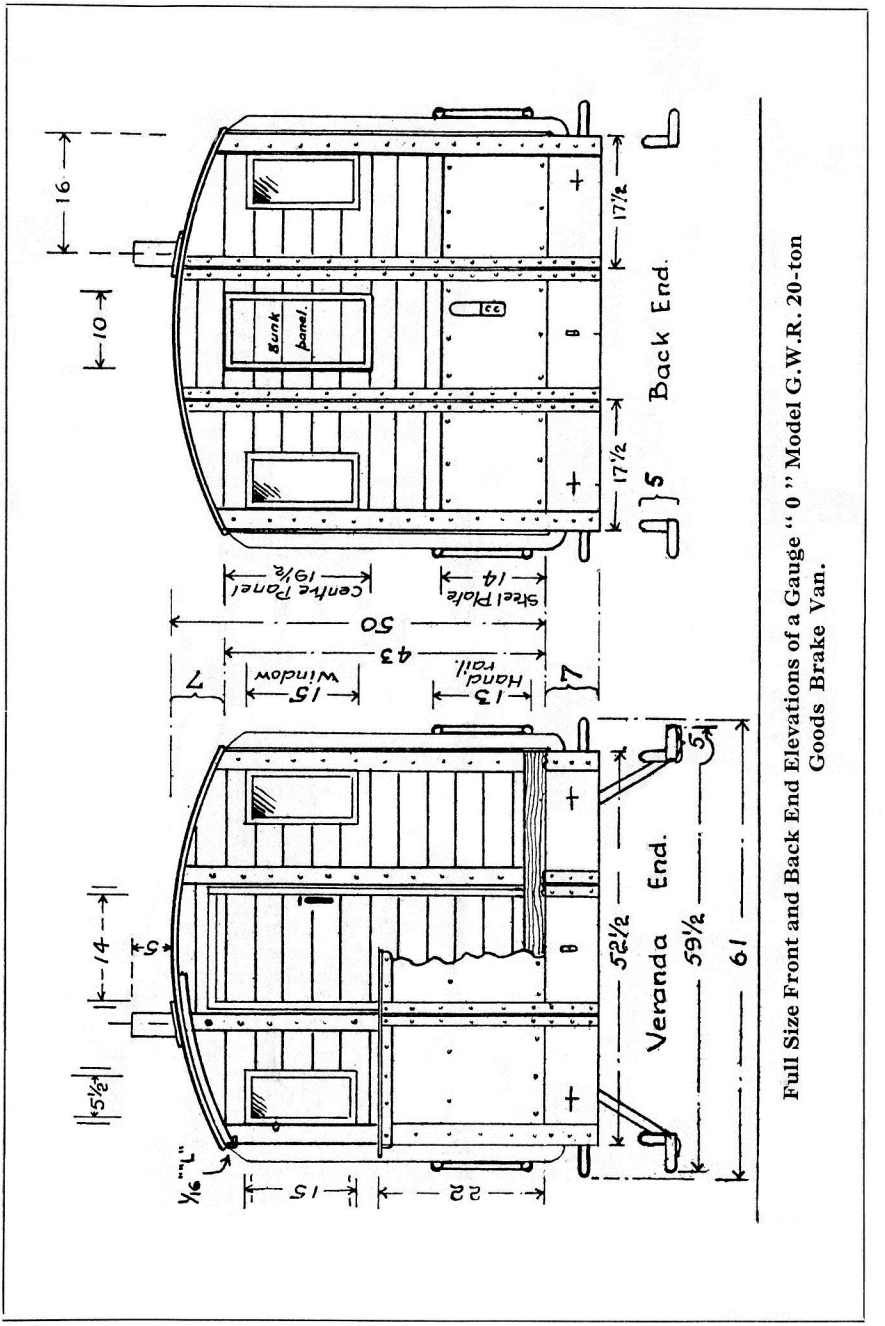
The 20-ton Van, Body.

The actual body work can be made in the same way as was described in the article on the Southern Railway new Goods Brake Van in the November 1929, issue, with sides and floor of $\frac{1}{8}$ in. wood and the ends of $\frac{1}{16}$ in. wood, so as not to throw the windows too far back.

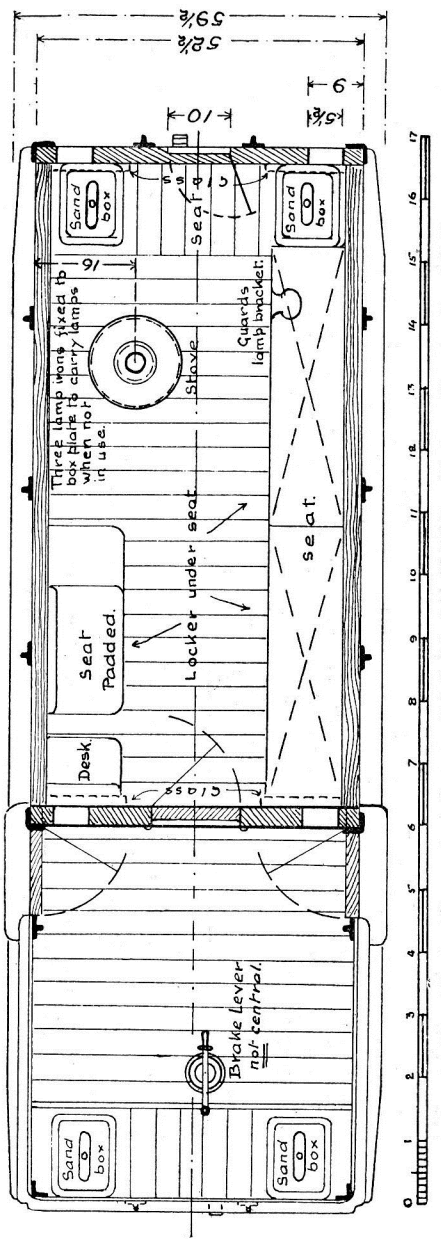
The verandah (or front end) can be made of thin tin or brass strip 22 mm. wide with a strip of $\frac{1}{16}$ in. "L" section



A Side Elevation of the Model 20-ton G.W.R. Goods Brake Van.



Full Size Front and Back End Elevations of a Gauge "0" Model G.W.R. 20-ton Goods Brake Van.



The Floor Plan of a Gauge "0" Model G.W.R. 20-ton Goods Brake Van.

brass soldered along the top edge, flange outwards, noting that this flange sticking out is broken at the corners —(see photo and floor plan). This "L" section comes outside the corner posts.

The corner posts can be made of either $\frac{1}{8}$ in. or $\frac{3}{32}$ in. "L" section brass, which comes down outside the sheet tin or brass of the verandah. The other four corner posts on the wooden body should be made of the same "L" section as used here. Note the shaping of these where they come down to the bottom of the solebar.

The verandah end of the body has steel strips up each side of the door.

Along the bottom of the sides and back are steel plates. These vary in height from 14 mm. high (as in the drawing) to 12 mm. high (as in the photo), and must be made of thin tin or brass because the "T" stanchions, sides and back, have to fit over them. These stanchions bend round the bottom of the body and down to the toe of the solebar as is the usual G.W.R. practice. The steel plates referred to are the same height at the back as they are along the bottom of the sides.

In some of the vehicles these steel plates come down below the bottom of the body by about $\frac{3}{4}$ mm. in gauge "0" scale, as can possibly be seen in the photo, which hides the top flange of the "L" section solebar.

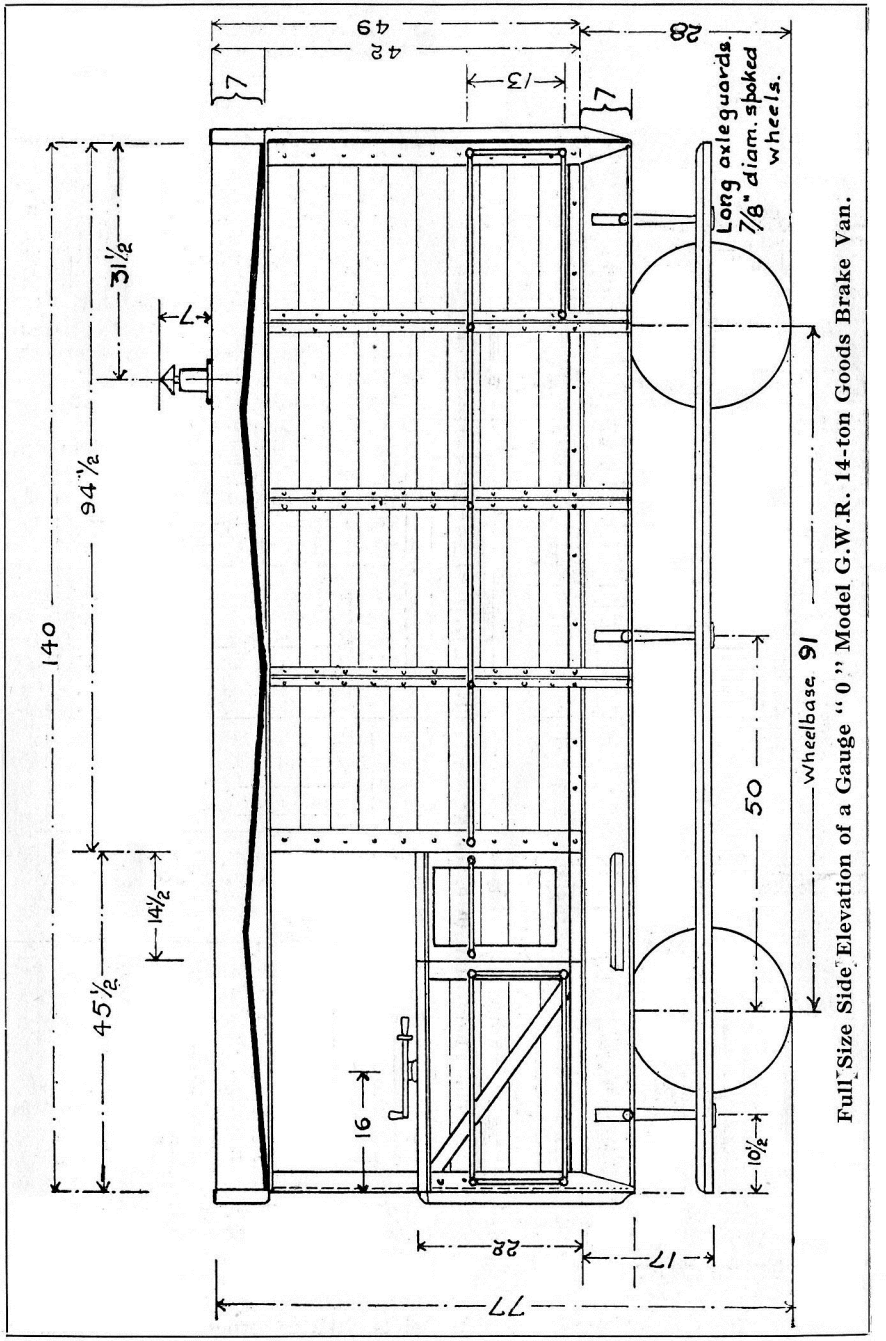
Handrails.

On the doors these can be bent round at the ends and forced into holes in the wood already drilled to receive them, but on the body and the verandah they will have to be held by very small split pins.

The back of the van has a small sunk central planked panel hinged for access to the open air.

Like the G.W.R. Cattle Van and the Southern Railway Goods Brake Van, there is a strip of $\frac{1}{16}$ in. "L" section along under the roof.

The roof can be made of the thick Bristol Board, or of tin or brass. There is a small section of "L" strip at the ends, like in other G.W.R. vehicles,



Full Size Side Elevation of a Gauge "0" Model G.W.R. 14-ton Goods Brake Van.

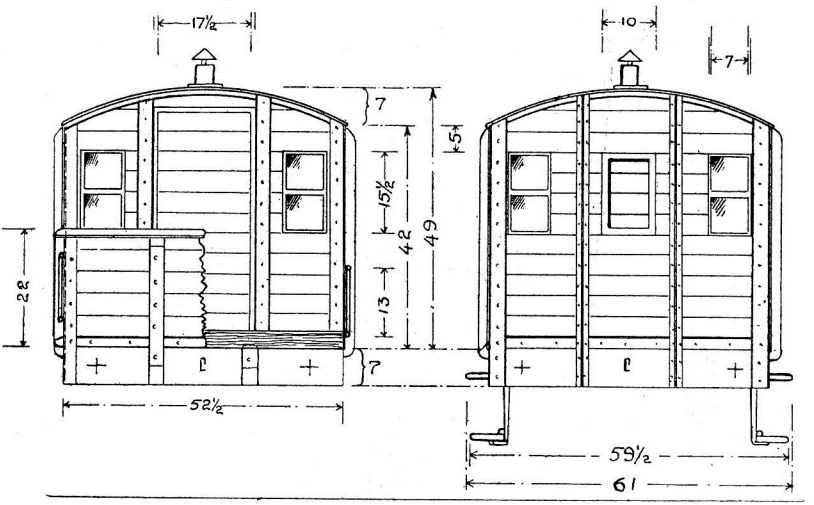
but which is almost impossible to bend accurately in so small a scale as gauge " 0 "

Underframe Details.

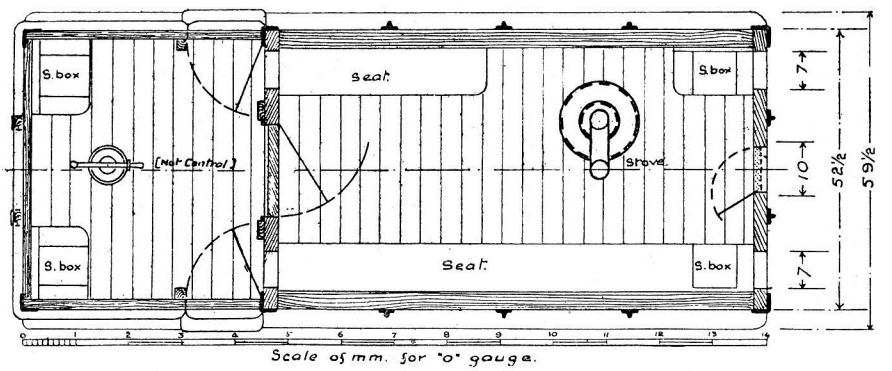
The solebar is 7 mm. deep and will have to be built up as has been explained in the article on the Southern Railway Goods Brake Van. Long coach type axle guards are fitted and spoked wheels.

The long bottom steps are 5 mm. each way and in the drawing should be 1 mm. lower than shown, the center of the bottom of the step co-inciding with the axle centres. See floor plan for how they taper at the ends. The two central supports are " L " section with flanges inwards. The outer ones can be seen in the photo and drawing. The two short steps under the doors are 22 mm. long and can be made as either in the drawing or as in the photo.

I have not got drawings showing brake or sanding gear, but the brake



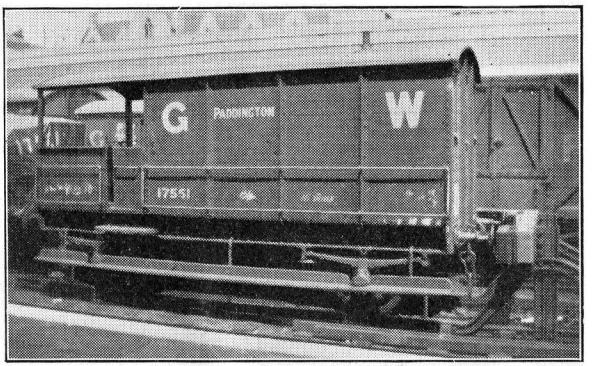
Front and Back End Elevations of a Gauge " 0 " Model G.W.R. 14-ton Goods Brake Van.



The Floor Plan of a Gauge " 0 " Model G.W.R. 14-ton Goods Brake Van.

blocks and hangers are similar to those described in the six-wheeled G.W.R. Milk Vans in the September, 1929, issue. Sand pipes can be seen in the photo and can be made of $\frac{1}{16}$ in. wire bent to shape.

Note.—The drawing does not show it, nor does the photo, but some of these vehicles have long single roof strips.



The G. W. R. 16-ton Goods Brake Van No. 17551.

Painting.

Roof and lettering : White. Body : G.W.R. Grey as is all the underframe gear and wheels. Interior of the verandah is grey with the inside of the roof white. Interior of the body is G.W.R. coach brown up to the window levels, and above that G.W.R. coach cream. Roof white inside.

The G W.R. 16-ton Goods Brake Van No. 56320.

The 14-ton Goods Brake Van.

The front and back double windows may be difficult to make and care will be needed here.

The verandah is of wood construction and some of these vans have $\frac{1}{16}$ in. " L " strip along the top as in the 20-ton van. The drawing shows a wooden coping. Some of these vans may have an " L " angle iron cross bracing on the verandah side, as in the 16-ton vans, in lieu of the wooden one shown, and metal " T " uprights at the end of the verandah instead of wood.

The drawing shows twin rain strips each side of the roof. Some vans have one long single roof strip each side in lieu.

I am informed that most of the Goods Brake Vans will be fitted with the steel plates along the bottoms of sides and ends, as in the 20-ton van.

In other respects these vans are similar to make, having the deep sole-bar, long axle guards and spoked wheels, with the same scheme of painting.

I enclose photos of a similar 16-ton Goods Brake Van.

(To be continued.)

C.N.R. First Aid Instruction Coaches.

The first of three novel rail coaches, intended to be used for the promotion of First Aid instruction among the 100,000 employees of the Company, has just been placed in service by the Canadian National Railways. The cars are actually hospitals in miniature, including the latest emergency equipment and lecture theatres for First Aid demonstrations.